

EXAMINATION		NATIONAL SENIOR CERTIFICATE	
GRADE		12	
DATE		NOVEMBER 2025	
SUBJECT		COMPUTER APPLICATIONS TECHNOLOGY	
PAPER		2	
MARK TOTAL		150	
DURATION (HOURS)		3	
NUMBER OF PAGES		17	



SOUTH AFRICAN COMPREHENSIVE ASSESSMENT INSTITUTE
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INFORMATION AND INSTRUCTIONS

1. This question paper consists out of:
SECTION A: (25 marks)
SECTION B: (75 marks)
SECTION C: (50 marks)
2. Answer **ALL** the questions/sections in the ANSWER BOOK.
3. Number the questions correctly according to the numbering system used in this question paper.
4. Start **EACH** question on a **NEW** page.
5. Leave a line open between **EACH** sub question.
6. Read each question carefully before answering and do **NOT** give more information than the question requires as this will **NOT** be marked.
7. One mark is awarded per fact; therefore, a 2-mark question would require **TWO** facts, etc.
8. Answers such as 'slower/faster' and 'cheaper' etc. will **ONLY** be accepted if they are motivated.
9. All answers **MUST** be related to Computer Applications Technology. Do **NOT** use brand names in your answers, unless specifically required.
10. Write neatly and legibly, in **BLUE** ink only.



SECTION A

QUESTION 1: MATCHING ITEMS

Choose an appropriate term/concept from COLUMN B to match the description in COLUMN A. Write down ONLY the letter next to the question numbers (1.1 to 1.10) in the ANSWER BOOK, e.g., 1.11 U.

COLUMN A		COLUMN B	
1.1	This software reads and renders web pages, allowing users to navigate between different websites	A	3D-forming
		B	Visual reality
1.2	Creating prototypes and physical models	C	Optical drive
		D	Solid State Drive
1.3	A digital record that stores transactions on many computers, making it very difficult to change any of the stored information	E	Avg
		F	Web browser
1.4	A technology used for entertainment or training purposes	G	CountA
		H	HTML
1.5	This device works on the same principle as a flash drive	I	Blockchain
		J	Count
1.6	This can lead to reduced focus, problems with decision-making and reduced overall productivity	K	Sum
		L	3D-printing
1.7	The process of discovering patterns and trends from large sets of data	M	<td>
		N	Average
1.8	This function will calculate the average of field values in an Access (database) report	O	Data mining
		P	Virtual reality
1.9	This spreadsheet function determines the number of non-empty cells in a specified range, regardless of the content of the cell	Q	Data warehousing
		R	Multifunction printer
1.10	This tag will create a cell in a table row	S	Information overload
		T	<tr>

[10]

**QUESTION 2: MULTIPLE CHOICE**

2.1 Various options are provided as possible answers to the following questions. Choose the correct answer and write only the letter (A–D) next to the question numbers (2.1 to 2.5) in the ANSWERBOOK, for example 2.6 D.

2.1 The medium a bar code scanner uses to read a bar code.

- A Radio waves
- B Light sensors
- C LTE
- D NFC

(1)

2.2 The type of software that has no formatting and cannot support any graphics.

- A RTF
- B TXT
- C STL
- D Utility

(1)

2.3 A standard used in wireless communication that provides high-speed data transfer between cellular devices.

- A LTE
- B FTP
- C 802.11 A/B/G/N
- D IMAP

(1)

2.4 The protocol used to send email messages.

- A POP3
- B SMTP
- C FTP
- D TCP/IP

(1)

2.5 This refers to the practice of working remotely, often from home or another location outside of the traditional office environment.

- A Small office home office ('SOHO')
- B Remote employment
- C Mobile office
- D Telecommuting

(1)

[5]



QUESTION 3: TRUE OR FALSE ITEMS

Indicate whether the following statements are **TRUE** or **FALSE**. Write 'true' or 'false' next to the question numbers (3.1 to 3.10) in the ANSWER BOOK. Correct the statement if it is FALSE by changing the underlined word(s) to make the statement TRUE.

Note:

You may **NOT** only use the word 'not' to change the statement.

No mark will be awarded if only FALSE is written.

- 3.1 Users can open multiple websites in a single browser window using multiple windows. (1)
- 3.2 E-learning involves the use of mobile devices such as smartphones and tablets. (1)
- 3.3 4IR focuses on the collaboration between humans and advanced technologies and NOT the combination of digital, biological, and physical technologies. (1)
- 3.4 SSD's have a limited number of write cycles. (1)
- 3.5 ISP's is a service that change the URL to a shorter, easier to remember URL. (1)
- 3.6 Hacking is the unauthorised access, manipulation and exploitation of computer systems or networks. (1)
- 3.7 A blog is a collaborative platform, allowing users to collectively contribute to content and to edit all content. (1)
- 3.8 An example of a field code in MS Word is shown in the image below. Ctrl+F9 is the shortcut to display field codes. (1)

- 3.9 Mail merge is used to automatically insert individual details into each copy of the same document. (1)
- 3.10 To paste only formatting into a spreadsheet, you use the paste special feature instead of the standard paste function. (1)

[10]

TOTAL SECTION A: [25]



SECTION B

QUESTION 4: SYSTEM TECHNOLOGIES

4.1 Updates are an important part of system maintenance. Briefly discuss TWO possible problems that can occur in a computer system if it is shut down while installing updates. (2)

4.2 Identify this type of connection.



(1)

4.3 Explain the benefits of using a printer that can print from cloud storage services compared to printing using only Wi-Fi. (2)

4.4 Software goes through different stages of development before the final version is released to the public. Answer the following questions.

4.4.1 Explain what a beta version is. (2)

4.4.2 A beta version of software may have compatibility issues with certain hardware. Identify TWO common hardware components that software must be compatible with. (2)

4.5 Web-based applications are becoming more popular with many benefits for both the user and the software creators. Answer the following questions.

4.5.1 Provide TWO reasons why web-based applications are more accessible to users. (2)

4.5.2 How often should you update a web-based application on your computer? Motivate your answer. (2)

4.6 Name TWO CPU hardware factors that affect the CPU's performance. (2)

4.7 Some adware is designed to display advertisements, while others may have more malicious intentions. Briefly describe how adware can be used for malicious purposes. (2)



- 4.8 Various slots and ports exist on the motherboard to enable connections to components and devices. Indicate which components will be connected to each of the following.
- 4.8.1 DIMM slots (1)
 - 4.8.2 ZIF-socket (1)
 - 4.8.3 SATA (1)
 - 4.8.4 HDMI (1)
- 4.9 Apart from the connection type, identify TWO hardware components that play a role in the quality of the images displayed. (2)
- 4.10 It is sometimes advisable to clear your browser history. Besides losing your browsing history, describe TWO disadvantages of clearing your browser history. (2)

[25]



QUESTION 5: NETWORK AND INTERNET TECHNOLOGIES

5.1 NFC is used by individuals and businesses. Answer the questions that follow.

5.1.1 Give a brief description of NFC. (2)

5.1.2 Distinguish between NFC and Bluetooth in terms of the connection distance and transfer speed. (2)

5.2 Give ONE strategy to prevent (not track) people from accessing inappropriate websites. (1)

5.3 The device shown below is commonly found in a home and performs two different tasks. These two tasks are usually performed by two different devices in larger networks. Identify the two devices that this one device replaces and give a brief description of the purpose of each device.



(4)

5.4 Name the communication medium used in long-distance undersea cables. (1)

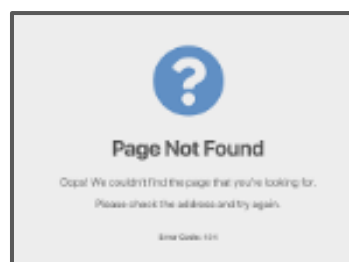
5.5 Cloud storage and cloud backup have become very common for both businesses and personal use. Answer the questions that follow.

5.5.1 Provide TWO advantages of using cloud backup services instead of cloud storage for backup purposes. (2)

5.5.2 Explain the difference between cloud storage and cloud backup. Clearly indicate cloud storage and cloud backup, followed by your answer. (2)

5.6 While browsing the internet, you may encounter a 'Page Not Found' error. Name ONE possible mistake a web developer might have made to cause this error.

Note: Your answer must relate to the actions of the web developer.



(1)

[15]



QUESTION 6: INFORMATION MANAGEMENT

- 6.1 A questionnaire is a set of questions designed to gather information from individuals. Various controls can be used when creating an electronic form with closed questions. Briefly explain what the following controls will be used for.
- 6.1.1 Radio buttons (1)
- 6.1.2 Check boxes (1)
- 6.1.3 Dropdown list/combo box/list box (1)
- 6.1.4 Date Pickers (1)
- 6.2 Database queries are powerful tools in data analysis. Justify why the following statement is true by referring to the options available when creating queries.
- Various features and tools in queries make it a valuable tool to analyse data. (2)
- 6.3 Charts are an excellent tool for visually representing data. Besides labels and a title, give TWO elements that can be added to a bar chart to make it easier to interpret. (2)
- 6.4 Distinguish between a bibliography and a citation by giving the difference in purpose of a bibliography and a citation. Clearly indicate bibliography and citation, followed by your answer. (2)
- [10]**



QUESTION 7: SOCIAL IMPLICATIONS

- 7.1 Different techniques can be used to get accurate results when searching online. Briefly explain what result you would get when using each of the following methods in your search.
- 7.1.1 Use quotation marks (" ") around the phrase you search for. (1)
- 7.1.2 Use a minus sign (-) in front of a word. (1)
- 7.2 Will shareware ever ask you to enter a product key? Motivate your answer. (2)
- 7.3 Differentiate between phishing and smishing in terms of the source used by each one. Clearly indicate phishing and smishing, followed by your answer. (2)
- 7.4 Keylogger software can be used for malicious purposes. Answer the following questions.
- 7.4.1 Provide a clear explanation of what a keylogger is. (2)
- 7.4.2 Give ONE example of the malicious intentions mentioned. (1)
- 7.5 Predict ONE negative consequence for your system if email software accepts an .exe (executable) file as an attachment. (1)

[10]



QUESTION 8: SOLUTION DEVELOPMENT

8.1 Which feature in email software would allow you to send an email to multiple recipients without displaying the email addresses of these recipients? (1)

8.2 The following image is part of a spreadsheet that lists items received by a shop selling second-hand goods. They use this spreadsheet to keep track of the stock they received and generate statistics. Answer the questions that follow.

	A	B	C	D	E	F	G	H	I
	Item	Item Code	Date Purchased	Date Sold	Purchase Price	Selling Price	Profit	Item Search	Item Selling Price
1									
2	Chair	Ch53	31/01/2024	10/02/2024	R250.00	R320.00	R38.00	Lamp	27
3	Computer	Co55	10/02/2024	12/02/2024	R720.00	R890.00	R81.00		
4	Cabinet	Ca72	11/02/2024	21/02/2024	R120.00	R180.00	R42.00		
5	Suitcase	Su24	15/02/2024	21/02/2024	R55.00	R88.00	R24.20		
6	Lamp	La46	21/02/2024	23/02/2024	R27.00	R42.00	R10.80		

8.2.1 The item code (column B) is generated by combining the first two characters of the item (column A) with a randomly generated number between 10 and 99. Apart from Concatenate, name the two functions used to generate the item code. (2)

8.2.2 The =VLOOKUP(H2,A2:E6,5,FALSE) function was entered into cell I2 to find the Purchase Price of an item. Explain the purpose of the following parameters/arguments in the VLOOKUP function:

- H2
- FALSE

Clearly state the parameter/argument followed by your answer. (2)

8.2.3 Mention the cell in which word wrapping should have been used. (1)



8.3 A database table has been created to store the data of learners enrolled in a school. The structure and a part of the table with data are shown below. Answer the following questions.

Field Name	Data Type
ID	AutoNumber
Name - Naam	Short Text
Surname - Van	Short Text
Grade - Graad	Number
Date enroled - Datum ingeskryf	Date/Time

ID	Name - Naam	Surname - Van	Grade - Graad	Date enroled - Datum ingeskryf
1	Peter	Makoba	10	2017-01-31
2	Jolene	Brits	10	2017-01-15
3	Sean	Alendale	11	2016-01-07
4	Chris	Burger	11	2016-03-21
5	Anina	Peterson	12	2016-02-02

8.3.1 How would the date of the first record in the date enrolled field be displayed if the format was changed to DD-MMM-YY? (1)

8.3.2 Identify the feature that can be used to view only the grade 11 entries while in datasheet view of the table. (1)

8.3.3 The following query has been created. Which of the five records given would be returned/displayed if the query were executed? Motivate your answer.

Field:	Name - Naam	Surname - Van	Grade - Graad	Date enroled - Datum ingeskryf
Table:	Table1	Table1	Table1	Table1
Sort:				
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:	"Peter"			
or:				>#2016-01-01#

8.3.4 Write the criteria that you would enter to retrieve all the grade 10 learners whose names start with the letter 'B'. Write only the name of the field you would use, followed by the criteria for that field. (2)

8.4 Explain the purpose of the following code.

```
<a href="Page1.html">
  
</a>
```

(2)

8.5 What do the <p></p> tags and using two
 tags e.g.,

 have in common? (1)

[15]

TOTAL SECTION B: [75]



SECTION C: INTEGRATED SCENARIO

Consider the following scenario when you answer Questions 9 and 10.

SCENARIO

A charity organisation is opening shops countrywide. People will donate items to the shops which the shops will then sell. The organisation has a headquarters from where all the shops will be managed. The headquarters and all shops are connected in a network.

QUESTION 9: INTEGRATION

9.1 The organisation is considering installing two computers in each shop. The specifications of these computers are as follows:

Computer A	Computer B
<ul style="list-style-type: none"> • Processor (CPU): Intel Core i5 • Memory (RAM): 8 GB RAM • Storage: 256 GB SSD • Operating System: Windows 10 • Monitor: 19-inch monitor • Graphics: Integrated graphics • Input Devices: Keyboard and mouse • Barcode scanner • Point-of-Sale (POS) System • Network Connectivity: Ethernet port and Wi-Fi capability • Security: Antivirus software • Ports: USB ports 	<ul style="list-style-type: none"> • Processor (CPU): Intel Core i7 • Memory (RAM): 16 GB RAM • Storage: 512 GB SSD • Operating System: Windows 11 • Monitor: 21-inch monitor • Graphics: Dedicated graphics • Input Devices: Keyboard and mouse • Barcode scanner • Point-of-Sale (POS) System • Network Connectivity: Gigabit Ethernet port and Dual-band Wi-Fi capability • Security: Antivirus software • Ports: Multiple USB

- 9.1.1 Besides the graphics specifications find the TWO specifications that indicate that Computer B will process faster than Computer A. (2)
- 9.1.2 Give TWO reasons why these computers will be used at the pay point. (2)
- 9.1.3 Computer A's graphics is listed as integrated and Computer B's graphics as dedicated. Differentiate between integrated and dedicated graphics in terms of the memory used by each one. Clearly indicate integrated and dedicated followed by your answer. (2)
- 9.1.4 The CPUs of both computers will be able to perform multitasking. Give a description of multitasking. (2)
- 9.1.5 Name TWO ports used for connecting a monitor to these computers that you would include in the specifications. (2)



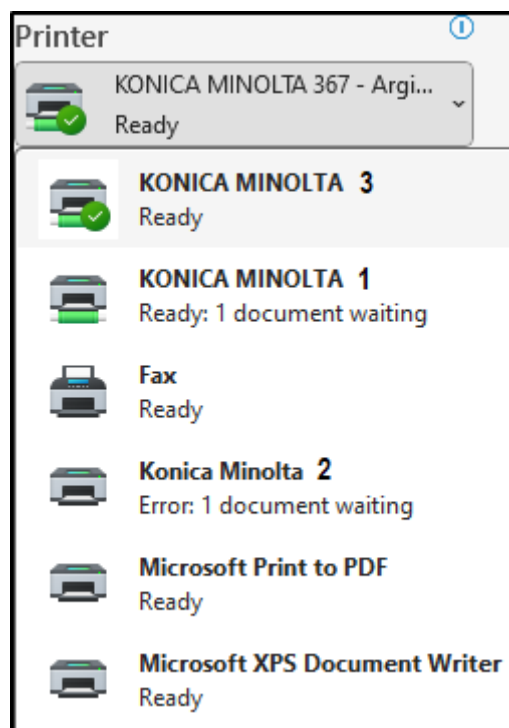
9.2 File compression software will be installed on all the computers in the organisation. Answer the following questions.

9.2.1 Briefly describe TWO reasons for using file compression software. (2)

9.2.2 Give ONE example of file compression software. (1)

9.3 Malfunctioning printers are very frustrating for employees. Describe ONE software and ONE hardware-related reason why printers might malfunction. Exclude paper, ink/toner and power-related issues. (2)

9.4 When one of the admin staff clicked the print option (not quick print), the image of printers below was displayed. Answer the questions that follow.



9.4.1 The staff wants to print to the Konica Minolta 1 printer, but every time a staff member tries to print, an incorrect printer is displayed at the top. Propose a solution that will allow them to simply click the quick print option to print to the Konica Minolta 1 printer. (1)

9.4.2 Explain why a message in the list of printers shows 'Ready: 1 document waiting'. (1)

9.5 Management will be able to make various decisions based on the data retrieved from the POS system used in the shops. Briefly discuss THREE assumptions that can be made from information gathered from a POS system to assist management in planning for the future. (3)



9.6 From Windows 10 onwards you can pause a Windows update but there is no option to turn it off. This has a significant impact on service packs. Answer the questions that follow.

9.6.1 Briefly describe what a service pack is. (1)

9.6.2 Name TWO advantages of updating your operating system regularly. (2)

9.7 What TWO possible disadvantages are there to file syncing? Exclude answers related to internet access. (2)

[25]



QUESTION 10: INTEGRATION

NOTE: The scenario of Question 9 also applies to Question 10.

- 10.1 Give an example of two-factor authentication that can be implemented when accessing financial records stored on the network of the organisation. (2)
- 10.2 Briefly describe how video conferencing/calling and video sharing can be used by the charity organisation. Clearly indicate video conferencing and video sharing followed by your answer. (2)
- 10.3 Network throttling and network shaping are two techniques used to manage and control network traffic. Differentiate between network throttling and network shaping in terms of the purpose of each one. Clearly indicate throttling and shaping followed by your answer. (2)
- 10.4 All shops will have internet connectivity. Answer the questions that follow.
- 10.4.1 In your own words, explain what the internet is and provide ONE popular reason why people use the internet. (2)
- 10.4.2 Explain what the Fair Usage Policy is in terms of internet services. (2)
- 10.5 The ICT cost to set up in all the shops is very high. Propose a solution to reduce the number of devices they need to purchase and thereby lower the cost. Motivate your answer. (2)
- 10.6 The admin staff wants to print all the pages in a large document. Describe TWO printer settings that can help promote green computing. (2)
- 10.7 Some of the employees are students who work at the shops on a temporary basis. The students cannot afford to purchase an office suite for themselves. Explain TWO solutions that they can implement to obtain office suites legally. (2)
- 10.8 A text-to-speech app is installed at one of the shops. What specific disability does the person using the app have? (1)
- 10.9 Staff members make use of an OCR application. What does OCR stand for and briefly explain what it is used for. (2)



10.10 The 'Track Changes' feature in word processing software offers several benefits, especially when many people are working on a document. Identify TWO ways in which each person working on the document is distinguished. (2)

10.11 The web developer is making changes to the organisation's webpage. Answer the following questions.

10.11.1 Identify and correct the TWO errors in the given HTML code by writing only the corrected lines in die answer book.

```
<html>
  <head>
    <title>HTMLFont size</title>
  </head>
  <body>
    <h1 style="color:red; font-size:=40px;" Heading</h1>
  </body>
</html>
```

 (2)

10.11.2 The text inside the <title> section is displayed in the label of the browser tab or window. Apart from this, give TWO other purposes for the text in the title section. (2)

[25]

TOTAL SECTION C: [50]

GRAND TOTAL: [150]